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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,117	11/27/2000	Keiichiro Tsukamoto	FUJO 18.000	5924

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Helfgott & Karas, P.C.
60th Floor
Empire State Building
New York, NY 10118-6098

EXAMINER

LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/723,117

Applicant(s)

TSUKAMOTO, KEIICHIRO

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, an ATM cell extraction unit to extract ATM cells from a SONET signal or a signal of the asynchronous network; an ATM mapping unit to map the extracted cells in a SONET signal or a signal of the asynchronous network and a signal transmitting unit to transmit a SONET signal or a signal of the asynchronous network; must be shown or the feature(s) canceled from the claim(s).

In contradiction with the claims 1 and 7 claiming a single ATM extraction unit, Fig. 2 shows ATM extraction units 22 and 26 as two separate units. Same problem was found with ATM mapping units and transmitting units.

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The disclosure is objected to because of the following informalities: paragraphs on page 1, lines 11-22 and on page 11, lines 11-23 are unclear and typographical error on page 12 line 10 (SONETn).

Appropriate correction is required.

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4. The disclosure is objected to, because abbreviations or acronyms AIS, VCXO, DTPin, DTNin, BIT LEAK, PLCP, RDI_L, ISID, FEAC are cited throughout the specification without explanation. Applicant should provide a full explanation for the acronyms at least at their first occurrence in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claims 1 and 7, how a single ATM cell extraction unit can extract ATM cells from a SONET signal or a signal of the asynchronous network (two separate networks);

How a single ATM mapping unit can map the extracted cells in a SONET signal or a signal of the asynchronous network (two separate networks);

How a single transmitting unit can transmit a SONET signal or a signal of the asynchronous network;

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The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 2, 5, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 8, claim limitation "an ATM network interface unit directly connecting a signal for an optical synchronous communications network to an ATM network" is unclear, because it is not understood what is a direct connection between two networks.

Regarding claim 5, claim limitation "PLCP" is unclear, because it is not disclosed in the specification or a well-known term of the art.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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10. Claims 1-4 and 7-9 are rejected (as understood) under 35 U.S.C. 102(e) as being anticipated by Takemura (US 6,671,271).

Regarding claims 1 and 7, Takemura teaches an ATM cell service apparatus and method (network element 10 on Fig. 1 and 6:32-42) which accommodates an ATM cell in a SONET network through an asynchronous communication network (ATM/STM or ATM service units on Fig. 1 and 6:54-67, 7:1-10), comprising:

- a. A SONET signal terminating unit (line unit 30 on Fig. 1 and 6:43-48);
- b. An asynchronous communication network signal terminating unit (ATM/STM or ATM service units on Fig. 1 and 6:54-67, 7:1-10);
- c. An ATM cell extraction unit to extract ATM cells from a SONET signal or a signal of the asynchronous network (bi-directional signal routing ASIC 102 on Fig. 7 and extracting virtual tributaries within the received frames/cells 11:44-54);
- d. An ATM mapping unit to map the extracted cells in a SONET signal or a signal of the asynchronous network (bi-directional signal routing ASIC 102 on Fig. 7 and formatting ATM cells into a cell stream 11:58-67);
- e. A signal transmitting unit to transmit a SONET signal (optical transmitter 106 on Fig. 7 and 11:37) or a signal of the asynchronous network (ATMU transmitters 110 on Fig. 7 and 11:39-40).

Regarding claims 2, 3, 8, Takemura teaches an optical synchronous communication network interface unit, common for SONET and ATM networks, connecting optical signals to an optical network (line unit 30 on Fig. 1 and 6:43-53) and ATM interface unit directly connecting a signal

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for an optical synchronous communications network to an ATM network (service unit 36 on Fig. 6 and 6:54-67, 7:1-10).

Regarding claims 4 and 9, Takemura teaches a single unit (bi-directional signal routing ASIC 102 on Fig. 7 and extracting virtual tributaries within the received frames/cells 11:44-54) extracting ATM cells from SONET and ATM signals.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Bigham (US 5,544,161).

Takemura substantially teaches all the limitations of claim 5.

Takemura does not teach using PLCP.

Bigham teaches using physical layer convergence protocol PLCL (13:6-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using PCLP of Bigham to the system of Takemura to ensure the system ATM cells and DS-3 frame alignment.

13. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Shimada (US 6,247,051).

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Takemura substantially teaches all the limitations of claims 6, 10 and 11, including a detection unit (ASIC 102 on Fig. 8 and 13:32-55) monitoring a SONET path performance through monitoring errors, AIS, alarms and path label.

Takemura does not teach cell generation to inform about the fault.

Shimada teaches cell generation to inform about the fault (OAM cells Fig. 3 and 3:25-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add cell generation to inform about the fault of Shimada to the system of Takemura to improve the system alarm management.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Kuwahara (US 123456789).

Takemura substantially teaches all the limitations of claim 11, including a detection unit (ASIC 102 on Fig. 8 and 13:32-55) monitoring a SONET path performance through monitoring errors, AIS, alarms, path label and inserting cells in SONET frame (bi-directional signal routing ASIC 102 on Fig. 7 and formatting ATM cells into a cell stream 11:58-67).

Takemura does not teach a cell insertion unit mapping an IDLE or Unassigned cell on the detection result.

Kuwahara teaches a cell insertion unit mapping an IDLE or Unassigned cell on the detection result (idle cell generating circuit 103 on Fig. 2 and idle cells insertion in absence of valid data 7:60-67, 8:58-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a cell insertion unit mapping an IDLE or Unassigned cell into a synchronous frame of Kuwahara to the system of Takemura to improve the system synchronization.

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Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takemura	US006671271B1	SONET payload envelope pointer control system.
Brolin	US006359859B1	Architecture for hybrid STM/ATM add-drop multiplexer.
Cardona	US006317439B1	Architecture for a SONET line unit optical transceiver and cross-connect.
Kuwahara	US006646992B1	Communication control method and equipment.
Shimada	US006247051B1	High speed transfer of failure information in an ATM network.
Bigham	US005544161A	ATM packet demultiplexer for use in full service network.
Takizawa	US005515386A	Transmission circuit for transmitting full-length data.
Irwin	US005862136A	Telecommunication apparatus and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is 703-305-4384. The examiner can normally be reached on 8:30 to 4:30.

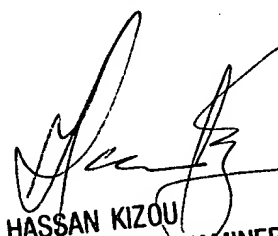
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan
Patent Examiner
04/01/04.



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600